DOCUMENT RESUME

ED 304 419 SP 030 944

AUTHOR Abel, Frederick J.; And Others
TITLE Learning Style and Inservice Teacher Stress: Is There a Relationship and What Can Be Done about It?
PUB DATE 22 Feb 89
NOTE 14p.; Paper presented at the Annual Meeting of the Association of Teacher Educators (St. Louis, MO, February 18-22, 1989).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Cognitive Style; Elementary Secondary Education; *Interpersonal Relationship; Stress Management; *Stress Variables; Teacher Behavior; *Teacher Burnout

ABSTRACT

The purpose of this study was to determine if there was any relationship between an individual teacher's preferred learning style and the amount of exhibited total stress. It also sought to determine if there was any specific area of stress which related to learning style. This was basically a replication of a study done in 1988 using a different population. Seventy-seven teachers from Northwest Georgia were administered the Wilson Stress Profile for Teachers (WSPT) and the Gregorc Transaction Ability Inventory. Data were tested by Analysis of Variance (ANOVA) for any relationship among learning style and stress levels. ANOVA was also used to see if there was any relationship between learning styles and individual areas of stress as measured by the WSPT. T-tests were used to see if there was any relationship between stress levels and the abstract-concrete and the random-sequential continuum. Conclusions are: (1) that Georgia teachers as a group, are moderately to highly stressed, much more so than the 1988 study's population of Montana student teachers; (2) there is a very limited relationship, if any, between learning style and stress levels; and (3) larger sample sizes might reveal significance in the areas of interpersonal conflicts and stress management techniques. (Author/JD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED304419

LEARNING STYLE AND INSERVICE TEACHER STRESS: IS THERE A RELATIONSHIP AND WHAT CAN BE DONE ABOUT IT?

Dr. Frederick J. Abel
Associate Professor and Head
Department of Education and Psychology
Berry College
Mount Berry, Georgia

Dr. Douglas L. Herbster
Professor of Education
Department of Education
Montana State University
Bozeman, Montana

Dr. Robert H. Prince
Assistant Professor of Computer Science and Mathematics
Department of Mathematical Sciences
Berry College
Mount Berry, Georgia

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

F. Abel

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

A paper presented at the annual meeting of the Association of Teacher Educators, St. Louis, Missouri. February 22, 1989.

SP030944

BEST COPY AVAILABLE

INTRODUCTION

This study is a replication of a study we did last year using a different population (Herbster, Abel, & Prince, 1988). Before conducting this study, we did a search of the literature over the past year and found a total of 55 new articles and/or research studies on the subject of teacher stress and burnout. However, except for our previous study, there were no studies which related stress to learning style. It is obvious from this search that the topic of stress and burnout is a popular one and that the problems created by excessive stress and resultant burnout are serious indeed. The April, 1988 issue of Agricultural Education Magazine is devoted to the problems of stress and burnout.

This seems to be an international problem. Perlberg & Kremer-Hayon (1988), report that teacher stress is higher in non-western cultures than in western cultures suggesting that culture is a factor in stress levels among groups of teachers.

Lutz & Maddirila (1988), contend that stress and burnout in Texas are caused by three factors: excessive paperwork, a feeling of a loss of control, and state mandated testing. Georgia teachers continually complain that excessive paperwork, teacher testing and state standards are making their jobs less than desirable. Dr.

Werner Rogers, State Superintendent of Public Instruction in Georgia, has indicated that he is pledged to reduce paperwork required under the teacher-testing and state-standards provisions of Georgia's Quality Basic Education Act (White, 1989).

In 1988, stress research continued to identify three dimensions of these phenomona which occur on a regular basis. These are: a) Emotional Exhaustion manifested by feelings of fatigue and "being drained." b) Depersonalization defined as impersonal responses toward students, and c) Lack of a feeling of accomplishment (Connolly & Sanders, 1988).

Hourcade, Parette, Jr., & McCormack (1988), report that student teachers experience stress at least equivalent to the regular classroom teachers. The findings of our research conducted last year with Montana student teachers conflict with these findings and will be discussed later in this paper.

This present study focused on regular classroom teachers in the northwest Georgia area and was designed to determine if there was any relationship between an individual teacher's preferred learning style and the amount of exhibited total stress. In addition, we were interested in seeing if there was any specific area of stress which related to an individual's preferred learning style.

For our purposes, learning style can be defined as distinctive behaviors which serve as indicators of how a person learns from and adapts to his/her environment (Gregorc, 1979).

METHODOLOGY

Subjects. Seventy-eight teachers from across northwest Georgia participated in the study. All of these teachers were teaching at the K-8 grade levels and in a variety of subject areas. Their teaching sites varied and included both rural and urban sites. All of these teachers were graduate students in the Berry College masters program taking at least one evening course during the time of testing.

Instruments. The Wilson Stress Profile for Teachers (1979) is a 36-item self report questionnaire. There are nine subtests which, when completed, give a composite stress score. These nine subtest categories include: Student Behavior, Employee/Administrator Relations, Teacher/Teacher Relations, Parent/Teacher Relations, Time Management, Intrapersonal Conflicts, Physical Symptoms of Stress, Psychological/Emotional Symptoms of Stress, and Stress Management Techniques. When completing the instrument, subjects are asked to rate each of four statements within a subtest on a scale of one to five with the lower numbers

indicating lower levels of stress and higher numbers indicating higher levels of stress. There are nine subtests of four statements each for a total of 36 statements. Therefore, the lowest posible score is 36 and the highest possible score is 180. Total scores in the range of 36-72 are considered to be "low stress," scores of 73-108 are considered to be "moderate stress," and scores from 109-180 are considered to be "high stress."

The Gregorc Transaction Ability Inventory (TAI) is an instrument developed by Anthony Gregorc (1979) of the University of Connecticut. It diagnoses learning style as related to individual means of transacting with the environment in the process of acquisition of information. The TAI is based on the use of abstract or concrete reference points for thinking and sequential or random preference for ordering. Therefore there are four learning styles possible, with individuals being able to function in one or all of them. These are Concrete Sequential (CS), Abstract Random (AR), Abstract Sequential (AS), and Concrete Random (CR). The instrument consists of forty words arranged in ten rows of four columns each. Subjects are asked to rate themselves on how these words relate to the way they process information. It is a forced choice instrument; a subject gives a score of four to a word which best describes his/her information processing, then a three, a two, and a one to the word which is least like him/her.

Therefore, in each column, a high score would be forty and a low score would be ten. A score of fifteen or less indicates a strong aversion to that particular style while a score of thirty or above indicates a strong preference for that particular style. Scores in between indicate that the subject processes in that style but has neither an aversion or preference for it.

Procedure. Students in four classes from Berry College's graduate program in education were administered both the WSPT and the GTAI. Teachers were then placed in one of three categories of stress (high, medium, or low) and placed in one of four learning styles (concrete sequential, abstract random, abstract sequential, or concrete random). It was much more difficult to place teachers in one learning stlye because some of them were very close and exhibited no strong or weak preference. We placed them in their strongest area. Data were tested by Analysis of Variance for any relationships among the learning styles and stress levels. ANOVA was also used to see if there was any relationship between learning styles and individual areas of stress as measured by the WSPT. T-tests were used to see if there was any relationship between stress level and the the abstract-concrete continuum and the random-sequential continuum.

DATA ANALYSIS

Table 1 contains the average and standard deviation on stress scores for all nine subtests and total stress scores, broken down by learning style. An analysis of variance was performed on the overall stress score and no significance was found for the four learning styles. From table 1, it can be seen that the highest average stress scores were for the two abstract learning styles. With the breakdown by categories, the areas of highest and lowest stress for student teachers may be identified.

An analysis of variance was performed on each of the nine stress subtests. The only significance that was found was in the category of stress management techniques. The results of this ANOVA are displayed in table 2.

T-tests were performed to determine whether there was a significant difference in mean stress scores for the concrete - abstract continuum and the sequential - random continuum. There was no difference on stress scores for the sequential - random continuum. The average stress scores for the concrete - abstract continuum was significant at the .05 level. This may warrent further investigation.

Overall, there seems to be little relationship between learning style and the amount of stress exhibited by K-8 teachers. This is possibly due to the fact that most teachers are capable of operating in more than one learning

style. Future research might focus on stress management techniques which are effective for teachers with particular learning style. Perhaps, if we can find effective strategies for particular styles, we may be able to tailor stress reduction programs accordingly and substantially reduce teacher burnout. Of course, the causes of severe stress should also be reduced.

When we compared data from last year's study of Montana secondary student teachers with data from this year's of Georgia K-8 inservice teachers some interesting findings emerge. Last year the abstract vs. concrete continuum was almost significant and this year it was significant. However, last year the abstracts were much less stressed than the concretes and this year, they have significantly higher levels of stress than the concretes. The only conclusion that we can draw from this finding is that abstracts are more volatile in terms of their reactions to different environments.

Last year, we had significance in the ANOVA for interpersonal conflicts - this year, it was almost significant at the .10 level.

In both these cases, it may well be that the difference is really significant but we needed a larger sample size to find it on a consistant basis.

On the average, Georgia teachers were more stressed than the Montana student teachers. Overall, Montana student

teachers were moderately stressed while Georgia teachers were moderately high to highly stressed. This could have been predicted since the causes of excessive stress discussed earlier are much greater in Georgia than in Montana.

After these two studies, we conclude that there is a very limited relationship, if any, between learning style and stress levels. Larger samples of like groups might reveal some significance in the areas interpersonal conflicts and stress management techniques. Any future research should focus on these areas.

TABLE 1

Subtest mean and standard deviation on the Wilson Stress Profile for four learning styles

	CS (N=46)		AS (N=5)		CR (N=10)		AR (N=17)	
	mean	s.d.	mean	s.d.	mean	s.d.	mean	s.d.
Student Behavior	10.8	2.1	11.8	3.7	11.1	2.2	10.8	2.4
Employee/Administrator Relations	7.4	2.8	8.2	2.3	6.9	3.2	7.9	1.9
Teacher/Teacher Relations	7.2	2.5	7.6	2.5	7.3	2.5	8.1	3.3
Parent/Teacher Relations	12.8	2.9	13.6	2.4	12.5	1.9	12.5	3.3
Time Management	13.7	3.7	16.4	4.8	13.1	4.4	15.7	3.2
Intrapersonal Conflicts	11.7	3.2	14.6	4.5	12.4	2.5	13.2	2.7
Physical Symptoms of Stress	11.4	3.4	14.6	4.3	12.5	3.6	12.6	2.7
Psychological/Emotional Symptoms of Stress	10.6	3.2	12.2	5.9	10.5	3.6	11.2	3.1
Stress Management Techniques	10.2	2.8	13.6	3.9	10.3	3.2	11.8	2.8
Total Stress	95.7	18.9	112.6	27.1	96.6	19.4	103.8	13.6

TABLE 2

ANOVA for Stress Management Techniques

Source	df	SS	MS	F	
Learning style	3	74.25	24.75	2.98	(p <.05)
Error	74	615.60	8.32		
Total	77	689.85			

REFERENCES

Agricultural Education Magazine. (1988). 36(1).

Connolly, C. & Sanders, W. (1988). The successful coping strategies - The answer to teacher stress? San Diego, CA: Association of Teacher Educators. (ERIC Document Reproduction Service No. ED 290 723).

Gregorc, A.F. (1979). Learning/teaching styles: Potent forces behind them. Educational Leadership, 36, 234-237.

Herbster, D.L., Abel, F.J., & Prince, R.H. (1988). Secondary student teacher stress and learning style. San Diego, CA: Association of Teacher Educators. (ERIC Document Reproduction Service No. ED 290 730).

Hourcade, J.J., Parette, H.P. Jr., & McCormack, T.J. (1988). Stress sources among student teachers. The Clearing House, (61), 347-350.

Lutz, F.W. & Maddirala, J. (1988). Stress, burnout and reform mandated accountability. New Orleans, LA: American Educational Research Association. (ERIC Document Reproduction Service No. ED 297 017).

Perlberg, A. & Kremer-Hayon, L. (1988). Sources of stress and burnout among faculty developers and coping strategies - Cross cultural perspectives. New Orleans, LA: American Educational Research Association. (ERIC Document Reproduction Service No. ED 296 266).

White, B. (1989 February 9). Rogers, Harris split on QBE. The Atlanta Constitution, 1A, 8A.

Wilson, C.F. (1979). Stress profile for teachers: Test manual and preliminary research data. Unpublished manuscript.